

Notice of Allowability	Application No.	Applicant(s)	
	10/531,474	TANAKA, TAKAHISA	
	Examiner	Art Unit	
	Chad Rapp	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the application filed on 4/15/05.
2. ☒ The allowed claim(s) is/are 11-20 renumbered as 1-10.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 04/15/05 | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

REASONS FOR ALLOWANCE

1. The following is an examiner's statement of reasons for allowance:

As to independent claim 11, "confirming the synchronization of the control cycle and the cycle of the single-rotation reference signal of the main spindle whose position has been corrected" and "outputting a command to a threading spindle when the main-spindle single-rotation reference signal and the control cycle are synchronized", in combination with other claimed elements and features is not taught nor fairly suggested by the prior art of record.

As to independent claim 16, "a threading-spindle interpolation starting detection means configured to confirm the synchronization of the control cycle and the cycle of the single-rotation reference signal of the main spindle whose position has been corrected " and "an interpolation means for each spindle configured to output a command to the threading spindle when the main-spindle single-rotation reference signal and the control cycle are synchronized", in combination with other claimed elements and features is not taught nor fairly suggested by the prior art of record.

2. Prior art

Asakura et al. discloses a thread cutting machine with a control system. Also disclosed is a rotation of the spindle controlled in a synchronous manner. The control of the machine is using rotating speed, rotation angle, feed position, thread pitch, rotating pitch. Asakura et al. discloses detecting position of a spindle. Using rotating speed and angle for correcting the spindle to bring it into synchronous speed, angle and position. Asakura et al. does not disclose confirming nor outputting based on confirmation that a single rotation reference signal of main spindle is in synchronization with control cycle. Asakura only discloses that the spindle and control cycle

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should be in synchronization and leaves it at that , without expanding on the point. So there is know checking for confirmation and since no checking there is no out sent out.

Froyd et al. discloses a cutting tool for cutting threads, measuring spindle position also using interpolator to synchronize cutting motion with spindle angular speed and also computes a position error. Froyd et al. does not disclose what Asakura lacks.

All other cited prior art of record in general deal with thread cutting machines and they lack the same thing that Asakura et al. lacks.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chad Rapp whose telephone number is (571)272-3752. The examiner can normally be reached on Mon-Fri 11:00-7:00.

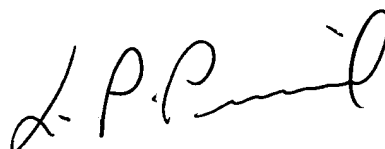
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (571)272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Chad Rapp
Examiner
Art Unit 2125

cjr

A handwritten signature in black ink, appearing to read "L. P. Picard", written in a cursive style.

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100